MIGUEL **JIMENEZ**

FULL-STACK SOFTWARE ENGINEER AND RESEARCHER

💼 EXPERIENCE

2016
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present

Ph.D. Student/Researcher - IBM Lead Student
University of Victoria + IBM Advanced Studies   Victoria, Canada 📍
· Conduct research and collaborate with other teams internal and external to the university to develop deployment tools for emerging technologies, such as Infrastructure as Code

2014
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2016

Graduate Research Assistant
Universidad Icesi   Cali, Colombia 📍
· Identified challenges in dynamic performance monitoring of Self-Adaptive Systems and proposed technical solutions to advance the state of the art
· Designed and implemented distributed applications, following the SOA philosophy, to realize dynamic performance monitoring at runtime
· Managed the computing resources of the DRISO research group's computing grid (~15 physical machines)

2012
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2015

Freelance Developer
                          Cali, Colombia 📍
· Designed and implemented an online auction application for the Colombian headquarters of LaFrancol laboratories, a pharmaceutical company
· Designed and implemented a management web application to support the Purchasing Department at Carvajal Espacios, a Colombian company leader in trends in design and office furniture
· Designed and implemented corporate websites and supporting sites (e.g., tutorials & tickets) for small Colombian companies, including SQL Soluciones Infomáticas, Ecohotel el Castillo, Juan Felipe Velez Accountant and Z-Graphics

📂 SELECTED PROJECTS

2018

TORNADO
University of Victoria + IBM
· Tornado is a two-way continuous integration framework for DevOps that enables bidirectional traceability of changes and transformation between a running system and its deployment specifications
· A proof of concept implementation of Tornado updates version-controlled Terraform specifications according to changes to an OpenStack deployment
· Source code is available online at github.com/rigiresearch/jachinte-DevOps2018-evaluation
Technologies Java, Maven, Eclipse Modeling Framework, OpenStack, Terraform, Docker

2015
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2017

AMELIA
Universidad Icesi + Carvajal T&S
· Amelia is a compact domain-specific language tailored for specifying and executing deployment workflows for distributed software systems
· We used Amelia's composable and extendable subsystems to specify and deploy 324 architectural configurations to re-design the reference architecture of a software family at Carvajal T&S, improving its throughput by a factor of five
· Source code, documentation and evaluation are available online at github.com/unicesi/amelia and github.com/unicesi/amelia-evaluation
Technologies Java, Xtend, Xtext, Maven, Rultor

2015

Stacky
· Stacky is a jQuery plugin that makes it easy to create user interfaces with panels that open horizontally
· 245+ stars and 20+ forks on Github
· Source code and documentation are available online at github.com/jachinte/jquery.stacky
Technologies JavaScript, jQuery, Sass, Grunt, Bower, npm

🎓 EDUCATION

2016
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Present

Ph.D. in Computer Science
University of Victoria · GPA: 3.85 / 4   Victoria, Canada 📍
Ongoing Deployment specification in the context of DevOps and Self-Adaptive Systems

2014
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2016

M.Sc. in Software Engineering
Universidad Icesi · GPA: 3.87 / 4   Cali, Colombia 📍
Thesis A Framework for Generating and Deploying Dynamic Performance Monitors for Self-Adaptive Systems

2009
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2014

B.E. in Systems Engineering
Universidad Icesi · GPA: 3.21 / 4   Cali, Colombia 📍
Thesis PaSCAni: A language for V&V of Functional Requirements at Runtime (in Spanish)

Courses
Entrepreneurship Laboratory with Mobile Technologies —2012
Massachusetts Institute of Technology + **Universidad Icesi**

Introduction to OpenStack (online) —2018
EDX

CONTACT INFO

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in linkedin.com/in/jachinte
✉ miguel@uvic.ca
📞 +1 778-533-0364

SOCIAL LINKS

○ github.com/jachinte
🐦 twitter.com/jachinte
📋 stackoverflow.com

SKILLS

Computer Languages

Java, Xtend
JavaScript
C
Python
C#
Oz
Shell Script
SQL
HTML5
CSS3 & Pre-Processors

Technical Skills

Architecture Design
Build Automation
Containerized Applications
Continuous Delivery
Data Mining (basic)
Infrastructure Provision
Language Engineering
Microservices Architecture
Object-Oriented Programming
Performance Monitoring
Service Component Architecture

Languages

Spanish (native)
English (fluent)
French (basic)

👥 MENTORING EXPERIENCE

2015

Knowledge Management and Dissemination: Alternative Soccer Culture
· Role: Technical Advisor
· Undergraduate degree project, Interactive Media Design Program — Universidad Icesi
· Student: Juan David Flórez Bautista

2014

Folii: Natural and Interactive Encyclopedia Mediated by Citizen Science
· Role: Tutor
· Undergraduate degree project, Interactive Media Design Program — Universidad Icesi
· Students: Juan Pablo Pérez, Mauricio Alberto Toro

📖 TEACHING ASSISTANT EXPERIENCE

University of Victoria
Victoria, Canada 📍
· Assistance Centre in Computer Science - Spring 2018
· Fundaments of Programming with Engineering Applications - Falls 2016, 2017
· Data Structures I - Fall 2016

Universidad Icesi
Cali, Colombia 📍
· Web programming (Computer Tech Club) - Springs 2012, 2013
· Data Structures and Algorithms - Spring 2011

📄 PUBLICATIONS

Journal Articles
· H. Arboleda, A. Paz, **M. Jiménez**, and G. Tamura, "Development and Instrumentation of a Framework for the Generation and Management of Self-Adaptive Enterprise Applications" Ing. Univ., vol. 20, no. 2, pp. 303-333, 2016.

Refereed Conference Proceedings
· **Jiménez, M.**, Villegas, N. M., Tamura, G., and Müller, H. A.. 2017. Deployment Specification Challenges in the Context of Large Scale Systems. In Proceedings of 27th Annual International Conference on Computer Science and Software Engineering, Markham, Ontario, Canada, November 2017 (CASCON'17), 7 pages.
· Angara, P., **Jiménez, P.**, Agarwal, K., Jain, H., Jain, R., Stege, U., Ganti, S., Müller, H. A.. 2017. Foodie Fooderson A Conversational Agent for the Smart Kitchen. In Proceedings of 27th Annual International Conference on Computer Science and Software Engineering, Markham, Ontario, Canada, November 2017 (CASCON 2017), 7 pages.
· Arboleda, H., Paz, A., **Jiménez, M.**, Tamura, G., "A Framework for the Generation and Management of Self-Adaptive Enterprise Applications" Computing Colombian Conference (10CCC), 2015 10th, Bogota, 2015, pp. 55-62.

Refereed Symposiums and Workshops
· **Jiménez, M.**, Villegas, N. M., Tamura, G., & Müller H.. DevOps Round-trip Engineering: Traceability from Dev to Ops and Back Again. In First international workshop on software engineering aspects of continuous development and new paradigms of software production and deployment, page to appear, Toulouse, France, 2018. Springer International Publishing.
· **Jiménez, M.**, Rivera, L. F., Villegas, N. M., Tamura, G., Müller H., & Gallego P. DevOps' Shift-Left in Practice: An Industrial Case of Application. In First international workshop on software engineering aspects of continuous development and new paradigms of software production and deployment, page to appear, Toulouse, France, 2018. Springer International Publishing.
· Bruel, J.M. & **Jiménez, M**. DevOps'18 Education Panel: Teaching Feedback and Challenges. In First international workshop on software engineering aspects of continuous development and new paradigms of software production and deployment, page to appear, Toulouse, France, 2018. Springer International Publishing.
· **Jiménez, M.**, Villota Gomez, A., Villegas, N. M., Tamura, G., & Duchien, L. (2014, September). A Framework for Automated and Composable Testing of Component-based Services. In Maintenance and Evolution of Service-Oriented and Cloud-Based Systems (MESOCA), 2014 IEEE 8th International Symposium on the (pp. 1-10). IEEE.

🎤 SELECTED POSTERS AND SHORT TALKS

DevOps Round-trip Engineering: Continuous Integration from Dev to Ops and Back
🇺🇸 URMD CRA Grad Cohort Workshop, March 2018. San Diego, United States (Poster)
🇨🇦 IBM CASTLE 2018, May 2018. Markham, Canada (Poster)

Deployment Specification Challenges in the Context of Large-Scale Systems
🇨🇦 CASCON, November 2017. Markham, Canada [Presentation, Poster, Petcha kutcha]
🇺🇸 URMD CRA Grad Cohort Workshop, March 2018. San Diego, United States (Poster)

A Framework for Generating and Deploying Dynamic Performance Monitors for Self-Adaptive Software Systems
🇨🇦 CSER, November 2016. Markham, Canada [Presentation, Petcha kutcha]
🇨🇦 CASCON, November 2016. Markham, Canada [Poster]
🇨🇴 Summer School on Informatics and Software Engineering, July 2015. Cali, Colombia [Poster]